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## IDENTIFICATION OF TANNED SKINS.

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The identification of leathers, including the detection of imitations, is, perhaps, simple when we have the whole skin before us and can judge by its size, shape, markings, and grain the kind of animal from which it came, but in many instances it is desirable to identify small samples of leather, or leather which has been manufactured into various articles. For the latter cases, and for the use of inexperienced observers who would find such knowledge useful, the method herein described will greatly facilitate the identification.

It is difficult to examine the grain of leather under the magnifying glass and carry in mind a true impression of this grain for comparison with that of the genuine leather. The area under magnification is so small and the brilliant or black color of certain leathers so likely to influence the light and shade effects to the eye that the deep hair follicles which are the characteristic markings of the grain are obscured.

Photographs are a great convenience for making comparisons of grains of leathers, but heretofore the photographing of these grains has been attended with but little success, because of the difficulty of properly lighting the surface by reflected light. Contrast and detail were consequently lost in the photograph and identification was made uncertain. The photographs shown (see Plates I-IX), however, indicate the excellent detail obtained in this method, where a wax impression of the grain is made and this impression photographed in transmitted light under a magnification of  $3\frac{1}{4}$  diameters.

A mixture of beeswax and paraffin is melted on a glass plate and allowed to flow uniformly over the surface. Paraffin alone has a rough surface when it hardens, but this condition is modified by the addition of the much finer grained beeswax, thus making the mixture more suitable for the photographing. Furthermore, beeswax imparts a certain tenacity to the cooling wax, which prevents it from

stripping from the plate, yet permits a clean separation from the leather.

When the wax has cooled to an almost solid state, the leather should be stretched over a perfectly flat surface and pressed tightly down upon the wax and held thus for a few minutes until the latter has hardened. The leather is then easily separated from the wax, leaving a perfect impression of the grain upon the wax-coated glass. Care should be observed to take the impression just as the surface of the wax crystallizes, for if the wax is too hot it will be absorbed by the leather and if too cold a detailed impression can not be obtained. This impression is permanent enough to keep for future reference. It can be photographed in transmitted light and the reproduction thus obtained used as a standard for comparison. Sufficient contrast is obtained in the negative, as the transmitted light is greatly dispersed in passing through the more raised portions of the crystalline wax, which represent the indentations of the grain, giving them depth and contrasting them with the high lights represented by the thin portions of the wax. A perfectly even film of the impression is essential, as the slightest variation in thickness produces an unevenness in the photograph. The thinner the film of wax the more striking is the embossed effect produced.

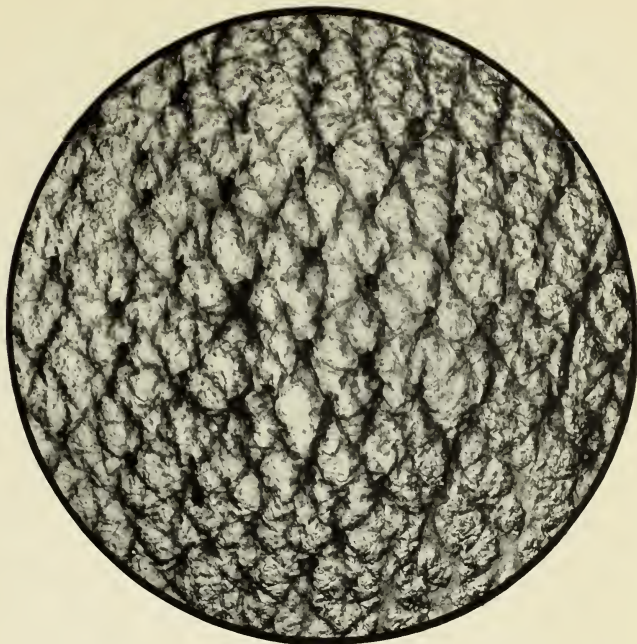
The procedure is valuable as a means of becoming familiar with the characteristic grains of leathers, and of having the reproductions of these grains in a convenient form as standards for comparison, which greatly facilitates the detection of imitations.

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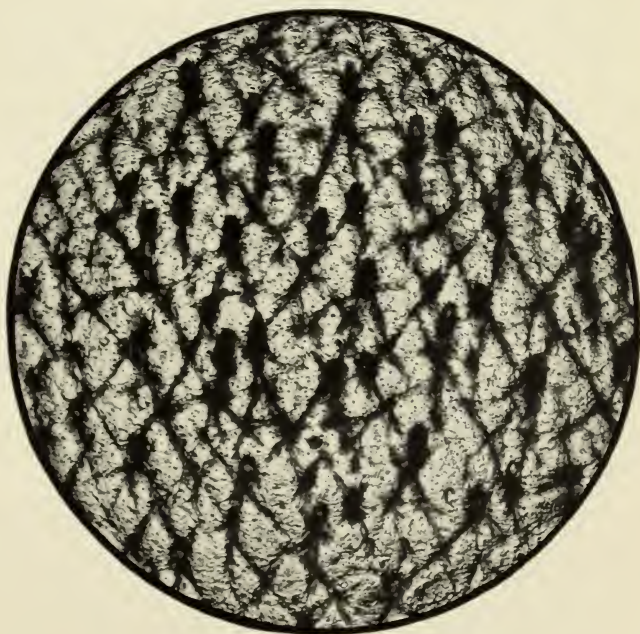
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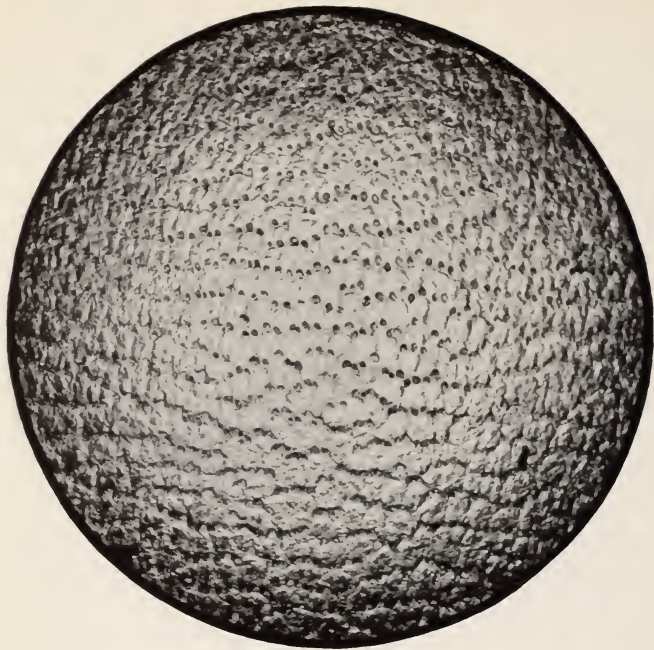




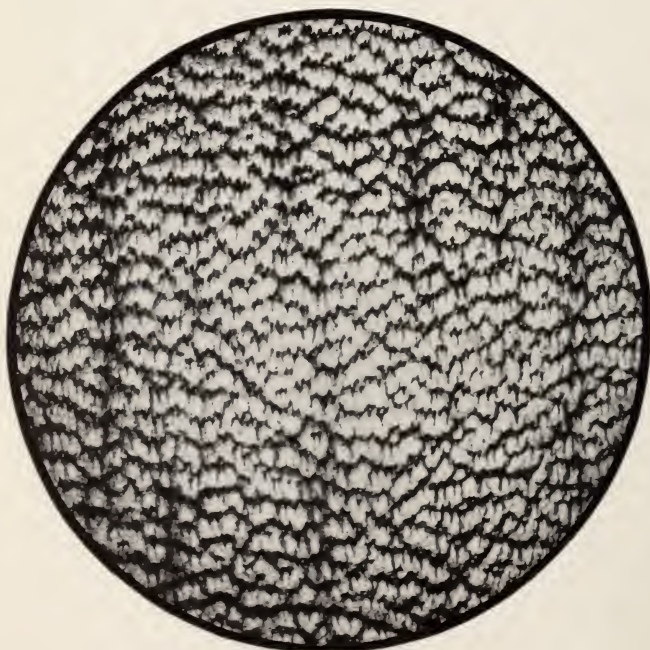
PIG SKIN.



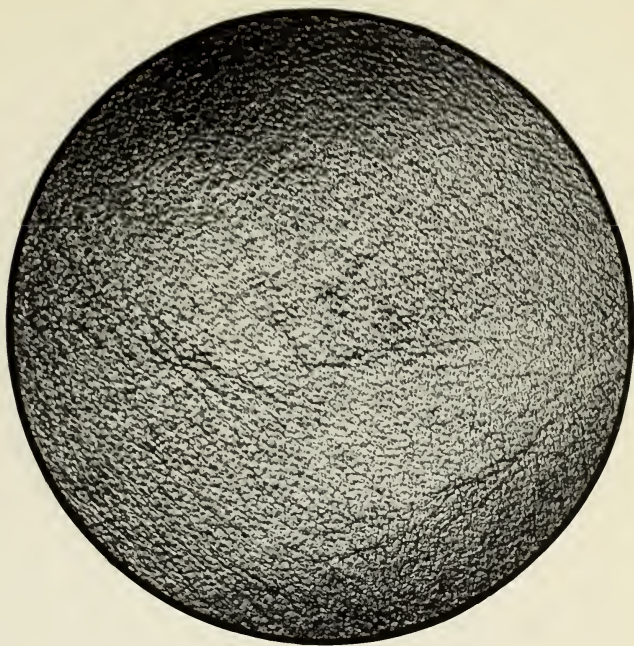
IMITATION PIG SKIN (ON SHEEP).



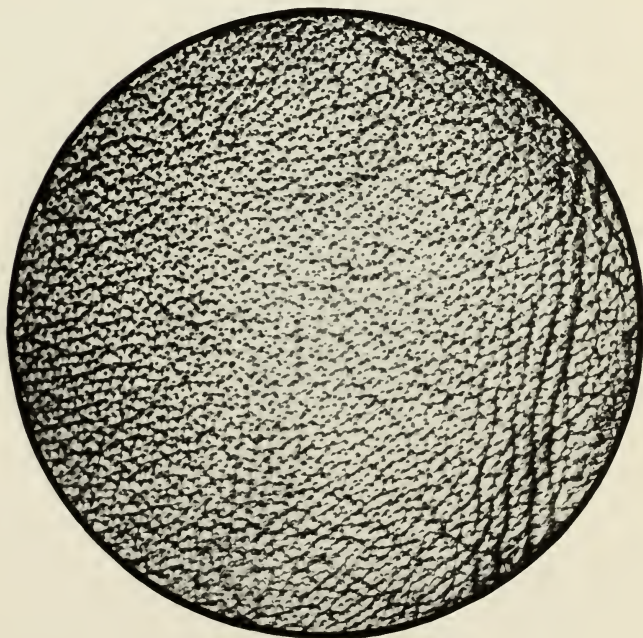
SEAL SKIN (IN CRUST).



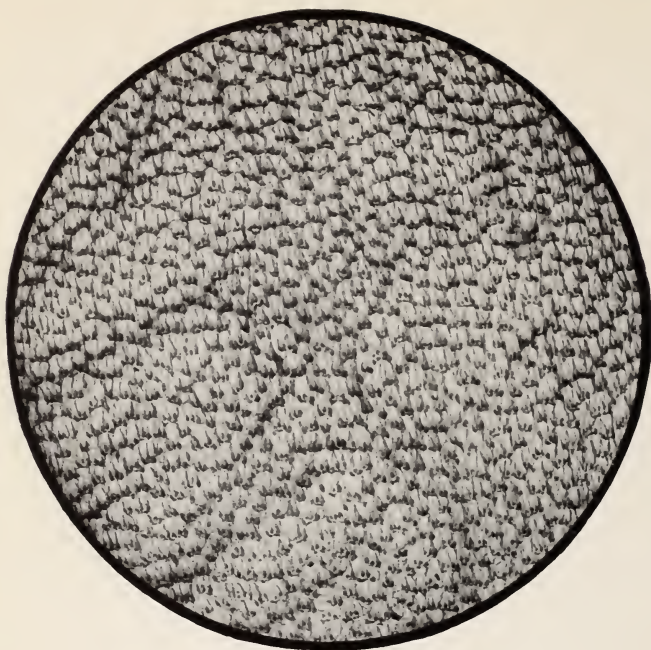
SEAL SKIN (DRAWN).



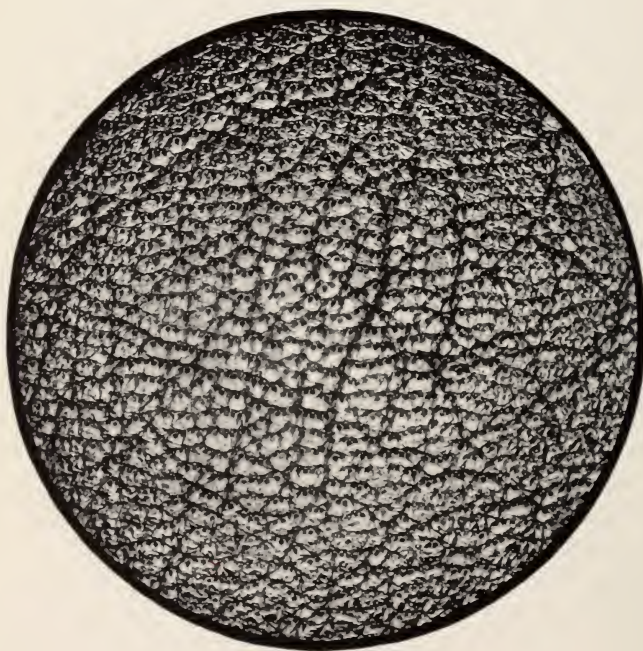
CALF SKIN.



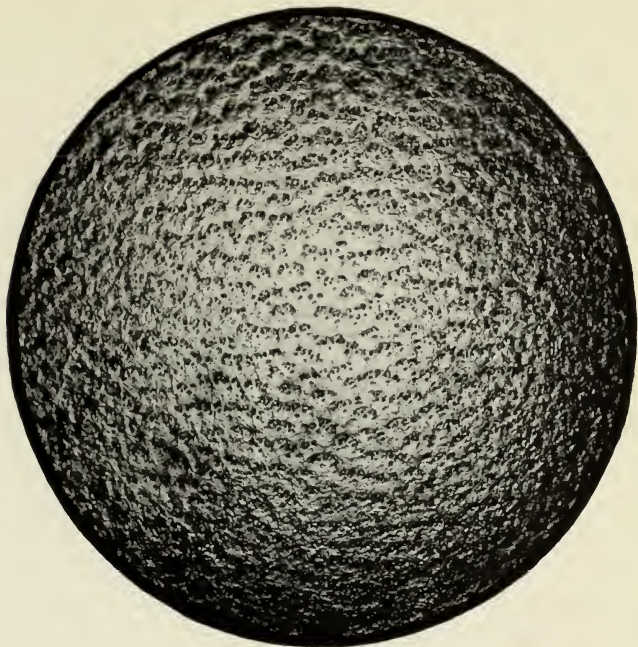
COW SKIN.



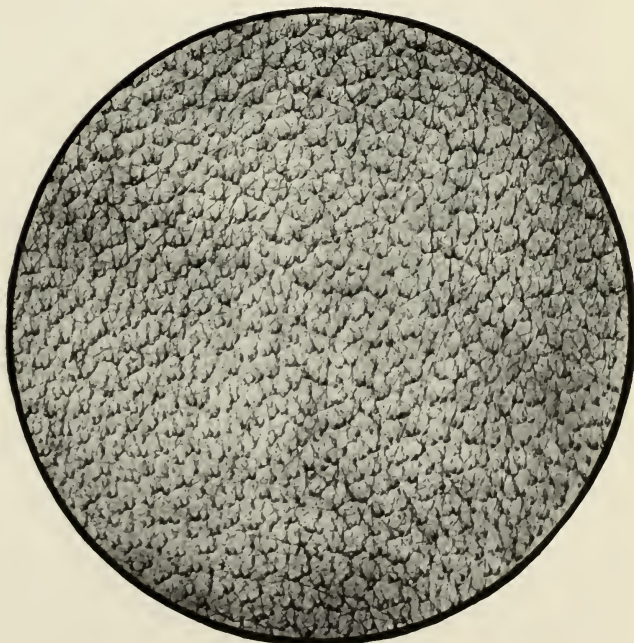
GOAT SKIN (IN CRUST).



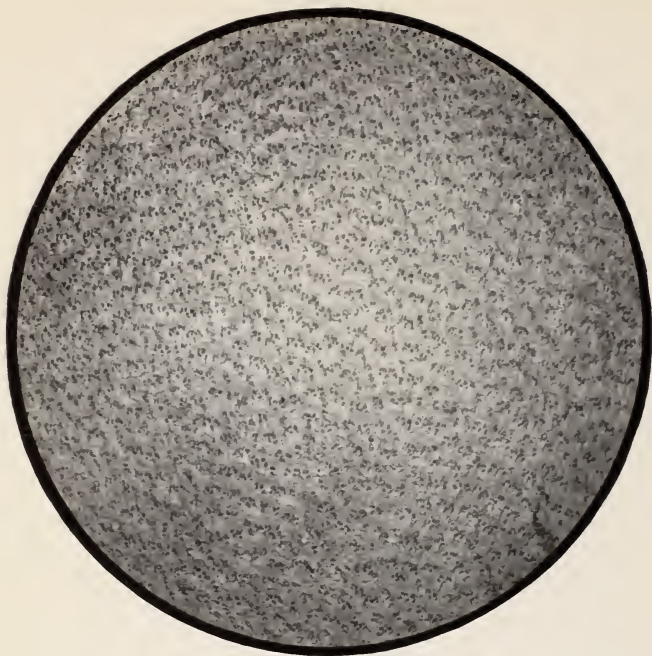
GOAT SKIN (BOARDED).



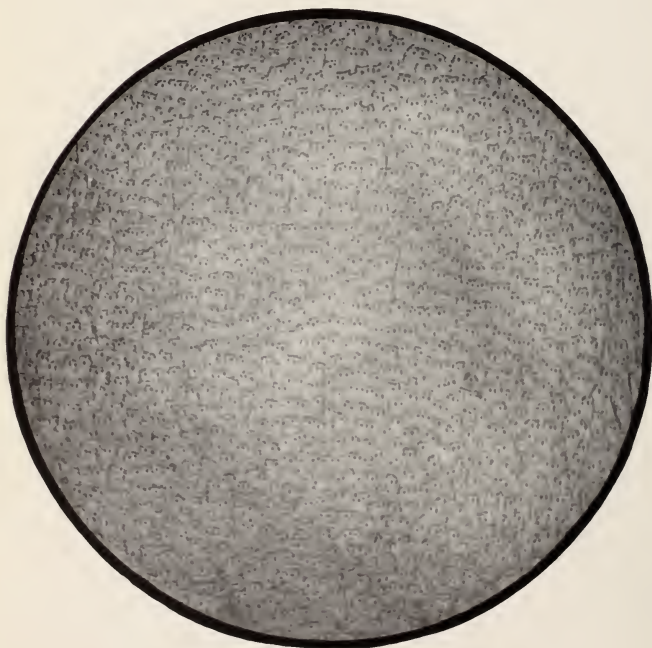
SHEEP SKIN.



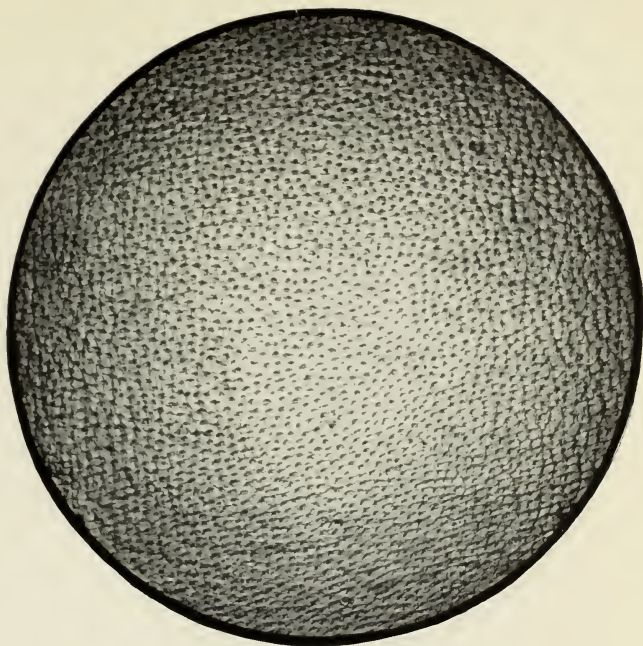
INDIA SHEEP SKIN.



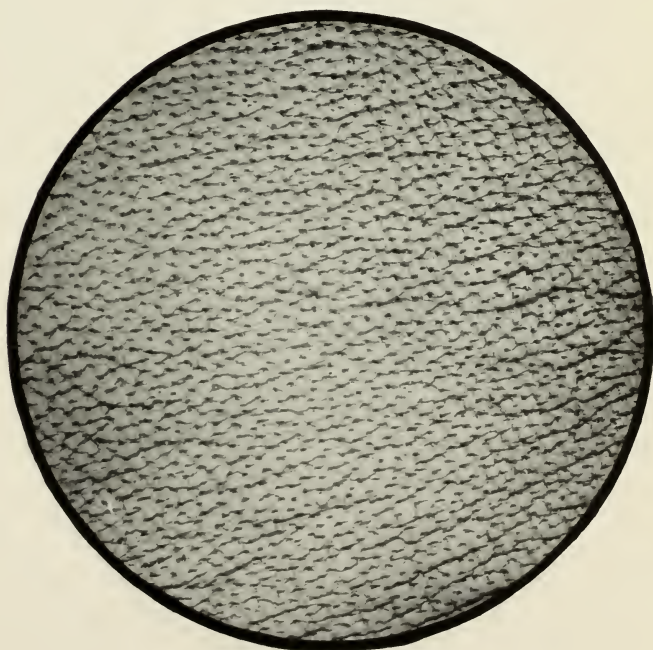
LAMB SKIN.



KID SKIN.



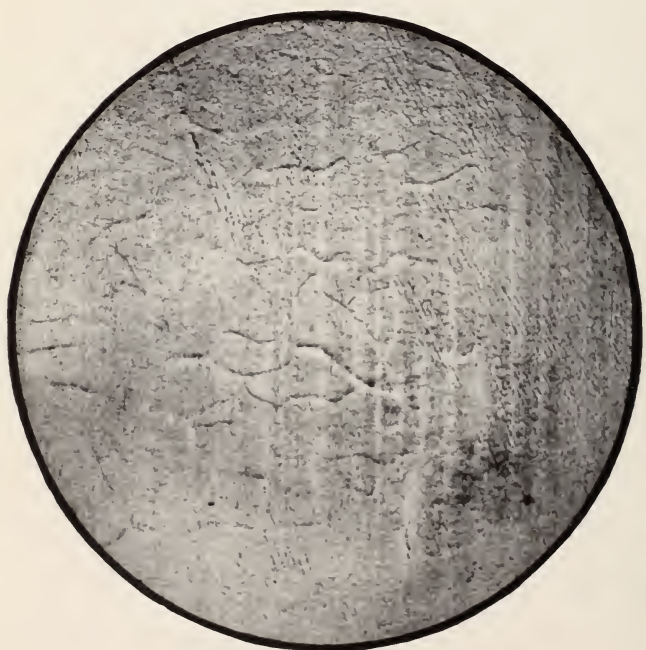
KANGAROO SKIN (BRUSH WALLABY).



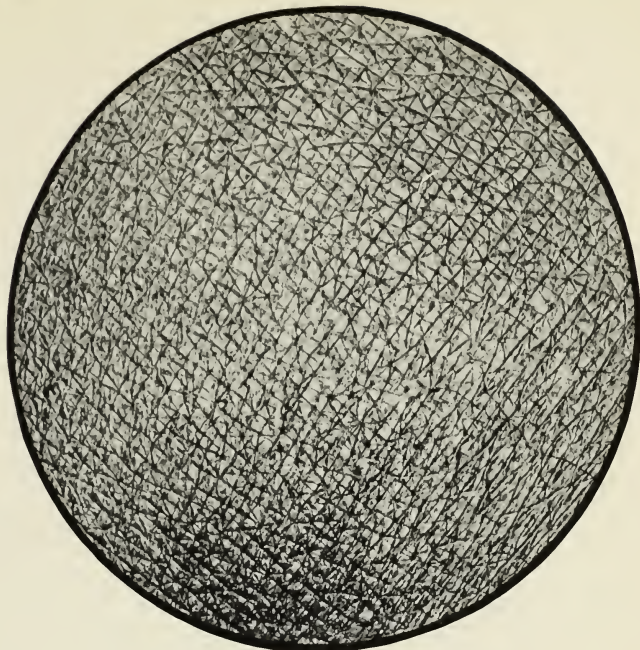
KANGAROO SKIN (GRAY).



HORSE SKIN.



PORPOISE SKIN.



HUMAN SKIN.



ALLIGATOR SKIN.





